

IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please ADD new claim 41 in accordance with the following:

1-10. (Cancelled)

11. (Previously Presented) A method of preparing a positive active material for a rechargeable lithium battery comprising:

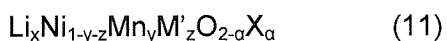
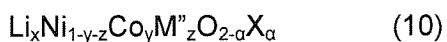
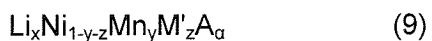
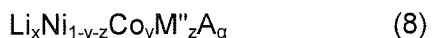
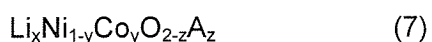
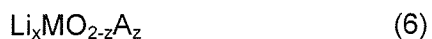
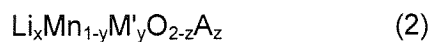
coating at least one lithiated compound with an organic solution of coating material source or an aqueous solution of coating material source to produce a coated lithiated compound; and

drying the coated lithiated compound at a temperature of approximately 60°C to 100°C forming a surface treatment layer on the coated lithiated compound without further heat-treating the dried coated lithiated compound,

wherein the surface treatment layer includes a coating element-included hydroxide, oxyhydroxide, oxycarbonate, hydroxycarbonate or a mixture thereof,

wherein the coating and drying of the lithiated compound is performed by injecting the lithiated compound and the organic solution or the aqueous solution of coating material source into a mixer and continuously increasing the temperature within the mixer.

12. (Original) The method of claim 11 wherein the lithiated compound is at least one lithiated compound represented by formulas 1 to 11,



where

$$0.95 \leq x \leq 1.1, 0 \leq y \leq 0.5, 0 \leq z \leq 0.5, 0 \leq \alpha \leq 2,$$

M is Ni or Co,

M' is at least one element selected from the group consisting of Al, Ni, Co, Cr, Fe, Mg, Sr, V, Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Ac, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No and Lr,

M'' is at least one element selected from the group consisting of Al, Cr, Mn, Fe, Mg, Sr, V, Sc, Y, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, Ac, Th, Pa, U, Np, Pu, Am, Cm, Bk, Cf, Es, Fm, Md, No and Lr,

A is selected from the group consisting of O, F, S and P, and

X is selected from the group consisting of F, S and P.

13. (Original) The method of claim 11 wherein the organic solution of coating material source is prepared by adding a coating material source to an organic solvent to form a mixture, the coating material source being selected from the group consisting of a coating

element, a coating element included-alkoxide, salt and oxide.

14. (Original) The method of claim 13 wherein the mixture is refluxed to form the organic solution of coating material source.

15. (Original) The method of claim 11 wherein the aqueous solution of coating material source is prepared by adding a coating material source to water to form a mixture, the coating material source being selected from the group consisting of a coating element included-salt and oxide.

16. (Original) The method of claim 15 wherein the mixture is refluxed to form the aqueous solution of coating material source.

17. (Original) The method of claim 11 wherein the organic solution of coating material source is formed from a coating element that is soluble in organic solvents, and the aqueous solution of coating material source is formed from a coating element that is soluble in water.

18. (Original) The method of claim 17 wherein the coating element of the coating material source is at least one element selected from the group consisting of Mg, Al, Co, K, Na, Ca, Si, Ti, Sn, V, Ge, Ga, B, As, Zr, and a mixture thereof.

19. (Original) The method of claim 11 wherein the concentration of coating material source in the organic solution or aqueous solution is 0.1 to 50 percent by weight.

20. (Original) The method of claim 19 wherein the concentration of coating material source in the organic solution or aqueous solution is 5 to 30 percent by weight.

21. (Cancelled)

22. (Previously Presented) The method of claim 11, wherein the coating of the at least one lithiated compound further comprises injecting blowing gas into the mixer.

23. (Previously Presented) The method of claim 11, wherein the coating of the at least one lithiated compound is performed under a vacuum.

24. (Previously Presented) The method of claim 11 further comprising sieving the dried coated compound.

25-37. (Cancelled)

38. (Previously Presented) A method of preparing a positive active material including a core and a surface-treatment layer, for a rechargeable lithium battery, the method comprising:

coating the core including at least one lithiated compound, with an organic solution of coating material source or an aqueous solution of coating material source; and

drying the coated core at a temperature of approximately 60°C to 100°C, without further heat-treating the core, forming the surface treatment layer on the core, wherein the surface treatment layer includes a coating element-included hydroxide, oxyhydroxide, oxycarbonate, hydroxycarbonate or a mixture thereof,

wherein the coating and drying of the lithiated compound is performed by injecting the lithiated compound and the organic solution or the aqueous solution of coating material source into a mixer and continuously increasing the temperature within the mixer.

39. (Previously Presented) A method of preparing a positive active material for a rechargeable lithium battery comprising:

coating a core having at least one lithiated compound with an organic solution of coating material source or an aqueous solution of coating material source; and

drying the core at a temperature of approximately 60°C to 100°C without further heat-treating the core, forming a surface treatment layer on the core,

wherein the surface treatment layer includes a coating element-included hydroxide, oxyhydroxide, oxycarbonate, hydroxycarbonate or a mixture thereof,

wherein the coating and drying of the lithiated compound is performed by injecting the lithiated compound and the organic solution or the aqueous solution of coating material source

into a mixer and continuously increasing the temperature within the mixer.

40. (Previously Presented) A method of preparing a positive active material including a core and a surface-treatment layer, for a rechargeable lithium battery, the method comprising:

coating the core including at least one lithiated compound, with an organic solution of coating material source or an aqueous solution of coating material source; and

drying the coated core at a temperature of approximately 60°C to 100°C, without further heat-treating the core, forming the surface treatment layer on the core,

wherein the coating and drying of the lithiated compound is performed simultaneously.

41. (New) A method of preparing a positive active material for a rechargeable lithium battery comprising:

coating at least one lithiated compound having an average diameter of 10µm with an organic solution of coating material source or an aqueous solution of coating material source to produce a coated lithiated compound; and

drying the coated lithiated compound at a temperature of approximately 60°C to 100°C forming a surface treatment layer on the coated lithiated compound without further heat-treating the dried coated lithiated compound,

wherein the surface treatment layer includes a coating element-included hydroxide, oxyhydroxide, oxycarbonate, hydroxycarbonate or a mixture thereof,

wherein the coating and drying of the lithiated compound is performed by injecting the lithiated compound and the organic solution or the aqueous solution of coating material source into a mixer and continuously increasing the temperature within the mixer.